DOCUMENT RESUME

ED 027 687 EC 003 754

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The Child as an Integrating Organism. Symposium, 1968.

New Jersey Association for Brain Injured Children, East Orange.

Pub Date 28 May 68

Note- 24p.; Speech presented at the New Jersey Association for Brain Injured Children, Symposium 1968 (New Brunswick, New Jersey, May 28, 1968).

Available from- New Jersey Association for Brain Injured Children, 61 Lincoln Street, East Orange, New Jersey 07017.

EDRS Price MF-$0.25 HC-$1.30

Descriptors- Attention Span, Auditory Perception, Behavior, Evaluation Techniques, *Exceptional Child Education, *Identification, *Learning Disabilities, Memory, Preschool Children, Psychomotor Skills, Sensory Integration, Student Evaluation, Teacher Role, Visual Perception

The lack of integration in children with learning disabilities is discussed, and the need presented for early identification and special education. Recommendations are made for times for screening and areas of learning to be assessed from kindergarten through high school. Observation of behavior in preschool children in the realms of attention, social perception, auditory behavior (both receptive and expressive), visual perception and memory, and motor coordination is suggested as a means for teachers to identify and remediate problems; methods for observing are given. Deficient learning in these areas is mentioned: body image disturbances, time orientation, and prenumber concepts. An appendix contains a form for the evaluation of preschool children. (RP)

ED027687

SYMPOSIUM
1968

THE CHILD
AS AN
INTEGRATING ORGANISM

FC03 754

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THE CHILD AS AN INTEGRATING ORGANISM

THE GYMNASIUM
Rutgers - The State University
New Brunswick, New Jersey

Tuesday, May 28th

Our fourth annual SYMPOSIUM was concerned with children who have good potential but have difficulty learning academic skills by traditional methods.

THE CHILD
AS AN
INTEGRATING ORGANISM

DONALD E. COWING - Introduction
Dept. of Educational Psychology
Rutgers - The State University

EDWARD G. SCAGLIOTTA - Moderator
The Midland School

SPEAKERS

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SPECIAL PROGRAM

Prior to SYMPOSIUM, Catherine Spears, M. D. , Miss Doris Johnson and the staff of the Morristown Memorial Hospital Child Evaluation Center hosted a demonstration program of early medical diagnosis and treatment techniques for pre-schoolers with language and communication disorders. This session, by invitation only, was open to M.D.'s and teachers of pre-school age children.

DORIS J. JOHNSON, M.A.

THE CHILD
AS AN INTEGRATING MECHANISM

by Doris J. Johnson

The theme selected for this symposium - - "The Child as an Integrating Organism" - - has particular significance for the education of children with learning disabilities. In essence, this theme is a primary objective of our work for we are concerned with a group of children who do not integrate experience normally. Even though they have adequate sensory integrity and mental ability, they do not learn in the expected manner because of deficits in processing certain types of information. Our task is to explore the nature of the processing disturbances and to create an educational schema which will facilitate learning and integration.

The term "integration", according to Webster (1956) has several definitions that are relevant to our discussion. One is, "Co-ordination and relation of the total processes of perception, interpretation, and reaction insuring a normal effective life". A second is, "Harmonious co-ordination of behavior and personality with one's environment". Clearly these definitions serve as major educational goals.

A lack of integration in children with learning disabilities can be seen in various ways. For example, many have significant discrepancies between auditory and visual functions. Some learn well visually, but they cannot perceive, interpret, or remember what they hear. Others are good auditory learners, but poor visually so they are unable to read, write, or calculate. Many have discrepancies between receptive and expressive abilities - - that is, between input and output. Others show variability in *intra*sensory and *inter* sensory processing. They learn via a single sensory channel but they cannot coordinate material from two or more modalities. Some can process only certain *types* of information. For example, they may be able to process verbal or nonverbal information but not both. Still others have marked discrepancies in the *level* at which they can process material. Whereas some have disturbances in perception, others have limitations in the ability to remember, to symbolize or conceptualize. Finally, a lack of integration may be manifested in a child's drawings or behavior. A vivid example is shown in the drawing of a man by a six-year-old in Figure 1.

Figure 1

In the normal child all learning processes are relatively equal, albeit allowances must be made for individual differences. If a child hears, we expect him to understand; if he comprehends we expect him to speak. If he reads silently we expect him to read aloud. These same assumptions cannot be made in regard to children with learning disabilities. Instead, various "learning circuits" must be examined to determine the specific nature of the problem. In many respects, the teacher of children with learning disabilities has something comparable to a group of inoperative TV sets - - some with poor visual systems, others with poor auditory systems, and some with impaired synchrony. Children, however, unlike television sets, do not have external controls for regulating volume, brightness, and other features. Therefore, the teacher must modify the environment, the materials, or the presentation of the materials in order to "clarify the picture" for the child - - that is, to facilitate learning.

Without special education children with learning disabilities will not be able to actualize their potential. Most will remain among the underachievers and, perhaps, will join the ranks of the school drop-outs, and eventually the unemployed. Unfortunately, this is a great waste of potential. The rationale for special programs might well be taken from Gardner's book, *'Excellence'*. (1961). Although he was not referring specifically to children with learning disabilities his eloquent message is pertinent. Gardner states, "The fact that large numbers of American boys and girls fail to attain their full development must weigh heavily on our national conscience. And it is not simply a loss to the individual. At a time when the nation must make the most of its human resources, it is unthinkable that we should resign ourselves to this waste of potentialities. Recent events have taught us with sledge hammer effectiveness the lesson we should have learned from our own tradition - - that our strength, creativity and further growth as a society depend upon our capacity to develop the talents and potentialities of our people". In another instance he says, "What we must reach for is a conception of perpetual self-discovery, perpetual reshaping to realize one's best self, to be the person one could be".

In order to help children with learning disabilities become what they could be, we are obliged to initiate programs of early identification and special education. By doing so, we can shift the emphasis from *re*habilitation to habilitation. Every attempt should be made to detect learning problems *before* a child experiences repeated failure. Programs of early detection are not necessarily synonymous with pre-school identification. Although many disabilities can be identified in early childhood, others will not be manifested until students are exposed to new symbol systems in school. For example, severe auditory perceptual problems could be detected in children by the age of nine or ten months; however, disorders of written language are not detected until seven or eight years. Only when the environment places new demands on the learning systems will certain disabilities become evident. In like manner, the limitations

of an electrical circuit are apparent only when overloaded with too many appliances. Programs of early identification of learning disabilities, in order to be most comprehensive, should consist of periodic assessments at crucial periods of development. These "check points" might be compared to the developmental milestones observed by the pediatrician. Our "check points", however, would pertain specifically to learning. In reality, these check points occur every time new concepts or experiences are introduced, but the identification process could be systematized by having psycho-educational teams perform screening batteries on a routine basis. The specific behaviors to be studied would vary with the age of the child and what is expected of him. Similarly, the pediatrician routinely assesses motor coordination, but he examines skills such as walking or hopping only at specific times in the child's development.

Many school systems currently have routine testing programs which could be very useful for early detection of learning disabilities. However, all too often the test results are utilized only in a gross way to determine whether a student should be promoted or retained, or whether he should be placed in a high or low group. These same test results (including an analysis of raw data) could be used much more effectively. Any low test score or a failure constitutes a warning signal - - a signal that something should be done. That "something" usually involves a more careful study of the child. In some instances the failure may be due to limited mental capacity in which case the goals should be reduced. In others, the problem may be due to faulty vision or audition. Still other failures may result from poor motivation or study habits. But failures also result from specific learning disabilities. In any case, the reasons for the poor performance should be explored and appropriate recommendations should be made. Identification without modification of the educational program is of little benefit to the child.

The first screening to be initiated in a school system could be arranged prior to kindergarten entrance. The areas of learning to be assessed would include at least the following: (a) general behavior, play, and social skills, (b) auditory behavior--including both verbal and nonverbal skills, (c) visual behavior - - including various areas of visual perception and visual-motor integration, (d) motor behavior - - gross and fine coordination. The kindergarten teacher, alerted to patterns of strength and weakness, could modify groupings and activities accordingly. In large school systems, children might be grouped in rooms where specific auditory or visual functions would be emphasized. Small developmental kindergartens might be established so that certain children could be observed more carefully. Students with moderate to severe problems would be studied intensively by the psycho-educational team. Those designated as having specific learning disabilities would be assigned to a special teacher, either in a self-contained class or in a resource room.

Another crucial period for screening follows the year of kindergarten. Reading readiness tests should be analyzed, not according to an overall state of readiness, but according to learning patterns - - auditory, visual, etc. Such an analysis could provide the basis for groupings in the first grade, particularly for reading, writing, and language. Children would be grouped according to their *styles* of learning, not just their *rate* of learning. While rate is an important variable it is not always the most significant.

During the latter half of first grade we recommend a more careful study of each child's reading ability. Detailed observations regarding the nature and number of words a child remembers, his comprehension, and his ability to attack new words should be included in the analysis. By second grade, specific attention should be given to writing and spelling skills. The child's style of imagery should be observed in order to determine the most effective means for study. Some will learn by visual techniques, others by auditory, others by kinesthetic. Every attempt is made to reduce random recommendations, particularly if the child has an uneven pattern of learning and development.

In the middle grades more attention should be given to written language and higher levels of conceptualization. Some children are adept at learning the skills for reading and writing, but they cannot conceptualize. Hence, by fourth or fifth grade when they are expected to see relationships, make comparisons, or draw inferences, their integrative problems become more apparent.

At the junior and senior high school levels, in addition to noting specific disabilities, we need to observe the size and balance of the academic load. As indicated previously, the child - - much like an electrical circuit - - has a threshold. Therefore we must avoid overloading. Some students with learning disabilities should be permitted to take a lighter load. Even though they do not have limited mental capacity, they do have thresholds for dealing with quantities of certain types of information. Conceivably, some can take lighter loads and go to summer school; others might plan to go through high school in five rather than four years. Identification of learning disabilities and modification of programs may extend through college. Those with high mental ability can complete a university program provided they receive special guidance and programming.

Although the earliest proposed plan for identification here was for pre-kindergarten entrance, ultimately the screening programs should begin sooner - at least by three years of age. With the help of pediatricians and other professional personnel, dynamic programs could be inaugurated to study infants.

Today I have been asked to discuss the screening and assessment of pre-school children. Rather than discussing specific tests or techniques I prefer to

focus on *areas* of behavior to be observed. These areas relate to learning systems and are susceptible to breakdowns if deficits in processing are present. Although there are many ways of analyzing human behavior, we have found the areas shown in Figure 2 to be useful when working with clinical teachers. This outline forms the basis for screening, for teaching, and for evaluation. It does not include every area from the intensive study (e.g. mental ability). Rather, the outline provides the teacher with a more systematic means of viewing a child's behavior so that tasks and assignments can be modified according to his needs.

The first broad area to be considered is behavior - - that is, the general interaction with the environment and other individuals. The first sub-area is labeled "Attention". It is well known that many children with learning disabilities have disturbances of attention. Some are distractible, others disinhibited, and others perserverative. As a result, the children do not learn normally. They can neither focus nor maintain attention. Those who perseverate cannot shift from one activity or thought to another so they attend for undue periods of time. It is important for the kindergarten or nursery school teacher to realize these boys and girls are not deliberately misbehaving; they are not provocative. Rather, the mechanisms for attention do not function properly. Many of the children want to learn, but in order to do so they must exert great mental energy to attend. As one boy said, "I wish I didn't have to work so hard just to listen". When a substantial portion of the mental energy must be devoted to attending, there often is little left for learning new material. Therefore, the clinical teacher structures the environment, the materials, or the presentation of materials so the child can function more satisfactorily.

The perceptive teacher observes the child interacting with various persons. Although there is no particular pattern of behavior in this population, it is important to note the ways in which children relate to parents, siblings, adults, and peers. With whom do they feel most comfortable? Has the disability interfered with their willingness to participate in group activities? Is the child overprotected? How does he attempt to communicate and control the environment, particularly if he has limited verbal facility?

Another area of behavior less well understood by most teachers is called social perception. Some children with learning disabilities are unable to learn from social experiences, particularly those that are nonverbal. They do not respond to nonverbal communication such as facial expression, gesture, or body posture. They fail to grasp the significance of nonverbal events in the environment so they literally do not know "when to come in out of the rain". Such children often have superior verbal understanding, but do not observe the clouds in the sky or other cues which should help in making a decision about wearing a raincoat, boots, etc. As a result of these nonverbal disorders, the

child often appears to be lacking in common sense. He seems strange to his classmates. He rarely imitates the behavior of the group and is slow in responding. Often behavior is disorganized. It should be made clear to teachers that the child with social imperception is not provocative, naughty, demanding, nor acting out. Furthermore, his problems are not due to poor home management or discipline. Parents who had no difficulty raising other children in the family report "this one" responded differently from early infancy.

Disorders of social perception can be identified by observing the child at play. Many fail to integrate toys into meaningful situations. The litte boy has no idea how to arrange the trucks and cars to play gas station, and the little girl randomly places toys in a doll house without any purposeful organization. The disability also can be identified by asking a child to arrange pictures in a meaningful sequence. Those with nonverbal disorders cannot perceive which picture should precede or follow another. In contrast, children whose problems are primarily verbal can arrange the pictures properly but they cannot tell a story.

A second major area of study is auditory behavior - - both verbal and nonverbal. The first dimension of this "circuit" to be clarified is acuity. A hearing loss of even a minor degree interferes with comprehension and expression. If there is any question regarding the child's ability to hear, further audiometric study should be recommended.

Knowing that a child hears, we next ask, "Does he perceive sounds and words normally?". Is the message coming through clearly? Or, like the poor telephone connection, is the message fuzzy? Is there static? In the assessment of auditory perception we are not concerned with the child's ability to *interpret* sounds or words, but with his ability to distinguish one sound from another. Various dimensions of perception are studied. One of these is pitch. Can the child distinguish differences between high and low tones - - between mother's and father's voice? Secondly, can he perceive differences in volume - between loud and soft tones - - between a loud, forceful "no" and a more gentle directive? We also study perception of rhythm and inflectional patterns. Since language is composed of patterns of sounds and words, this is a critical aspect of perceptual development. The perception of nonverbal patterns can be observed by noting whether a child differentiates the patterns of daddy's footsteps from those of little brother, or by noting whether he responds to differences in slow and rapid beats in music.

Discrimination of verbal sounds also is assessed. The child is asked to tell whether two phonemes, syllables, or words are the same or different (e.g. "es - et"; "ship - chip"). If problems are detected one always asks the very basic question, "What does it affect?". Does the perceptual deficit interfere

with noverbal functions, comprehension, articulation, or some other facet of learning. As much as possible, the teacher relates the deficit to critical areas of learning.

The next major level of auditory input pertains to comprehension. We need to know whether a child understands what he hears. Some do not perceive words properly; hence they do not understand. Others, however, perceive words correctly and may even repeat them, but without comprehension. In order to determine whether a child has a disturbance in verbal comprehension, he is given tasks or tests which require the interpretation of verbal symbols but which do not demand a verbal response. If he must speak in response to a question, it is difficult to ascertain whether the problem occurs at the level of input or output. Moreover, those who repeat without understanding can be deceptive, for they give the impression they comprehend. Therefore, children are given statements such as "Show me the flower", or "Show me the one that grows in the ground", or "Show me one that you do not eat". The auditory language sections of many reading readiness tests are invaluable for studying comprehension. The clinical teacher analyzes errors and tries to determine which aspects of the language each child's "system" cannot handle. Some children make simple word-object associations (e.g. they understand nouns), but they cannot understand lengthy verbalizations. Some fail to understand specific semantic units such as prepositions. After the problem is delineated, the teacher "times" the verbalizations (words) with experiences in an attempt to improve the child's comprehension.

A third area of auditory input concerns memory. How much can the auditory system hold and for what length of time? Also, what type of information can the system hold? Short term memory is evaluated by asking the student to respond to series of drum beats, claps or other nonverbal patterns, to single words, and series of instructions. Again, we will try to arrange tasks so the child does not have to speak, lest verbal output problems interfere with his response. Long term memory is studied by observing what the child remembers from day to day. If a teacher realizes that a student has limited auditory memory she can easily modify classroom assignments. She might reduce the number of instructions given and present them more slowly so the student has a greater chance for success. Many children fail assignments, not because they are unable to complete them, but because they cannot remember the oral directions. The teacher of children with learning disabilities, meanwhile, will attempt to improve memory span by helping the child utilize cues from other sensory modalities or develop systems of organization.

The study of auditory expressive language begins with an examination of the structure and function of the oral mechanism. Although children with learning disabilities do not have severe motor handicaps (in the sense of a

paralysis), some do have deficits in motor processing which interfere with their ability to speak. They cannot learn the motor patterns for imitating sounds and words, yet they eat, chew and swallow normally. Often the assessment begins by watching the child eat, drink, etc. It is interesting to note that many are able to lick an ice cream cone when the object is present, but they cannot imitate a licking movement. An inventory is taken of all the movements, sounds, and words the child can produce-- both on a vegetative and a voluntary level. Careful observations are made to see under which conditions the child improves his performance. Is he aided by watching the speaker? Is he helped by verbal directions (e.g. "Close your lips").? Teaching techniques capitalize on the child's strengths (Johnson and Myklebust, 1967). The primary objective is to assist the child in learning the motor pattern for words which he cannot produce.

Another problem, well-known to many teachers, is a disturbance in auditory sequencing. Certain children can say all of the sounds of the language, but they do not remember the exact pattern. Typical mistakes are "cat-a-pake", "topato", or "bakset". The teacher listens for errors in the child's spontaneous expression, but evaluates immediate memory for sequence by giving him words to repeat. A disturbance usually is corrected by breaking the words into parts and building them up in rhythmic fashion (e.g. "po -- po -- ta -- ta -- to -- to; po-ta -- po-ta; ta-to; po-ta-to- - po-ta-to; potato").

Next we need to know whether a child can remember words he wants to use. Some can remember words for purposes of recognition but not full recall. Hence, they use gesture, pantomime, functional definitions, or associations when they try to communicate. In the evaluation we look for a discrepancy between the child's ability to *comprehend*, his ability to *repeat* words, and his ability to *call up* words spontaneously. Clinically this means the child is asked to "Point to your shoes, your coat, your belt, etc.", then to "Say these words after me - - 'shoes', 'coat', 'belt', and finally he is asked to respond to the question, "What is this?". Children with retrieval difficulties have no problems with the first two parts of the task, but they fail the latter. The objective of remediation is to facilitate recall. One of the most effective techniques a classroom teacher can use is the multiple choice question. When a child fails, (or even before he fails), she might say, "Johnny, is this a belt or a button?". In this way, she provides auditory stimulation but also encourages the child to *use* the word.

The last major area of auditory output pertains to the formulation of sentences and stories. Many pre-school children with learning disabilities acquire a vocabulary but they do not learn the syntax of culture. They do not learn the rules for stringing words together. Frequently their sentences are telegraphic in nature (e.g. "Bill - me - go - park".). Others make mistakes

in grammatical construction. Various techniques are used for assessment, but perhaps one the most useful would be to record each child's language during "Show and Tell" time. Later the output is analyzed to note problems of word order, omission, improper verb tense, pronoun usage, etc. The clinical teacher also should note children who are slow in initiating a response or those who distort the sequence of ideas.

The analysis of the visual system follows much the same pattern as the auditory; however, the emphasis will be on perception, memory and visual-motor integration since the pre-schooler is not expected to interpret visual symbols.

The first area for exploration is vision. Problems of visual acuity, visual field, ocular imbalance, etc. should be studied by a visual specialist to ascertain whether there is a disturbance which inteferes with learning. Most children with learning disabilities have no difficulty seeing, but many do not know how to look. When asked to find something in a cupboard or to pick up a piece of paper from the floor they scan the environment erratically. They have no system for looking at pictures and books. Various techniques suggested by Kephart (1960) and others are useful for both evaluation and education.

In studying visual perception we ask many of the same questions that were raised during the discussion of auditory processes. Does the child perceive the figure normally? Specifically can he distinguish similarities and differences in color, shape, external detail, internal detail, size, position, and pattern. As much as possible we try to differentiate problems of visual perception from those of memory and visual-motor integration. Hence, most tasks involve a matching or marking response (e.g. Point to one that is the same). Visual sections of reading readiness tests are useful, particularly if errors are analyzed. While some children have gross disturbances in perception, others have difficulty only with single dimensions such as perception of size, position, or pattern. Remediation should be as specific as possible. The teacher should also be alert to any disturbances of figure-ground. Techniques of Strauss and Lehtinen (1947) and Frostig (1964) are beneficial. The child's ability to deal with part-whole relationships should be observed. Teachers might note how a student works with puzzles. Does he manipulate pieces randomly without looking? Does he perceive relationships? Also, what types of clues are most beneficial to him? Is he aided by feeling the pieces - - if so, with his eyes open or closed? Is he helped by verbal cues (e.g. "Look - - that piece has two sharp corners")? Will verbalization help stabilize visual perception ? Clinical observations of this type lead to more effective education.

Visual memory is studied - - both short term and long term. We need to know the storage capacity of a child's visual system. What things can he re-

member? For how long? Immediate memory can be evaluated by asking the child to look at series of objects and recall what he saw. As much as possible, tasks are arranged so the children do not have to speak or write when responding, particularly if they have multiple disabilities. Observations of long term visual memory are made by noting whether the child recognizes objects, faces, or locations. Later in school, long term memory for visual symbols will be studied in relation to reading and spelling.

Visual-motor integration is assessed by asking the child to draw geometric designs or to perform acts such as cutting. While deficits in motor function could interfere with these activities, many youngsters have the capacity to perform, but they cannot learn the motor patterns. Obviously developmental factors must be considered. Inventories of a child's successes and failures are taken to ascertain the level at which remediation should begin. In addition, the most effective "teaching circuit" is selected after observing the type of cues which modify the child's behavior (Johnson and Myklebust, 1967).

A psycho-educational team usually assesses gross locomotor coordination, manual dexterity, and laterality. However, the intensive study also should include a neurological examination. Limitations are noted and educational recommendations are made. In no way does the clinical teacher of children with learning disabilities act as a physical or occupational therapist. Rather, she works with children who have problems in learning motor patterns such as skipping, tying shoes, etc. She facilitates learning by structuring the task and by breaking down complex motor acts into smaller ones which are easier for the child to learn. With the automatization of each single act the teacher gradually makes the task more complex.

Body image disturbances are found in many children with learning disabilities. Some do not know the names of body parts; others do not use their bodies in space normally. They bump into things, do not know how to bend down to get through a small space, and generally look awkward. Typically an assessment includes the following: pointing to body parts on self and on dolls or pictures; naming body parts; organizing puzzles of the human figure; drawing the human figure; observation of the child in his environment.

Disorders of time orientation are found frequently in this population. Many school children are unable to tell time, or give the days and months in order. We do not expect pre-schoolers to perform these skills; nevertheless, every attempt is made to help them develop a basic sense of time. Frequently the disability is associated with a broader problem of sequencing and the knowledge of "before and after". Time means nothing unless the child has some basic understanding of pattern and order.

Finally, we are concerned with pre-number concepts. Our experience

suggests that children with severe problems in body image, visual-spatial relationships, and time orientation often have problems with quantitative thinking. Therefore, special attention may need to be given to this area of learning. The teacher also should note the ways in which auditory or visual disturbances interfere with the work in arithmetic. Students with auditory comprehension or memory problems may do poorly in mathematics, not because of a quantitative disturbane, but because they did not comprehend or remember the task.

In summary, the objective of this paper has been to "tease out" areas of behavior which should be considered when working with pre-school children who have learning disabilities. Although our goal is to achieve a fully functioning individual, it becomes necessary to isolate those facets of behavior which contribute to the lack of integration.

The goals and purposes of education for children with learning disabilities are the same as those for all children. Lest we become bogged down with special techniques and procedures, it is well to review the purposes of education outlined by Inlow (1966). He states that "basically, education has three major purposes: the *Transmissive*, the *Adaptive*, and the *Developmental*. To fulfill the transmissive purpose, education gives continuing stability to life by passing on to each new generation the tried, if not necessarily the true". - - "To fulfill its adaptive purpose, education helps the individual to acquire the skills, the knowledge, and the emotional adjustment needed by him to relate successfully to himself and to his world". - - "To fulfill its developmental purpose, education guides the individual toward his optimum growth, along these same dimensions, at each maturational level". - - "The transmissive, the adaptive, and the developmental are not serially related, rather mutually interacting and reinforcing. All three relate to man as a holistic organism made up of many parts and to a social order which is, and has ever been, multifaceted and complex". These are our goals and purposes. Hopefully with the inauguration of programs of early detection and proper education, these objectives can be attained.

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NORTHWESTERN UNIVERSITY
INSTITUTE FOR LANGUAGE DISORDERS
END-OF-QUARTER SUMMARY - - PRE-SCHOOL CHILDREN

Doris J. Johnson November, 1968

Name of Child _____ C.A. _____ School _____ Quarter _____ Year _____

BEHAVIOR:

Attention
- Hyperactive _____
- Distractible _____
- Disinhibited _____
- Perseverative _____

Relationship with teacher
- Warm, enthusiastic _____
- Shy, withdrawn _____
- Demanding _____
- Provocative _____
- Other _____

Relationship with children
- Friendly _____
- Shy, uncommunicative _____
- Aggressive _____
- Uncooperative _____
- Other _____

Relationship with parent & siblings
- Healthy, warm _____
- Parent overprotective _____
- Other _____

Social Perception: Describe the appropriateness of the child's behavior, play, etc. noting any problems which appear to be due to a learning disability. _____
_____

AUDITORY BEHAVIOR:

Acuity _____

Perception
- Environmental sounds _____
_____
- Noisemakers - Include comments re: pitch, intensity, etc. _____
_____
- Rhythm _____
- Verbal sounds (Discrimination of sounds or syllables _____
- Words _____

State best means of controlling problems. Other comments.

Describe most effective means of handling. Also comment in regard to child's attitude toward learning in general.

Give other details as necessary. Comment on the child's need for individual or group work.

Add other observations and recommendations.

Additional comments and recommendations.

Summarize problems and most effective techniques for remediation.

Comprehension

- Approx. Age Level _____
- Single common nouns _____
- Verbs: Present tense _____
  - Past _____ Future _____
- Prepositions _____
- Adjectives _____
- Pronouns _____
- Other _____

Comprehension - General Significance

- Information about things _____
- _____
- Questions with "Who, Where, When, How". _____
- Verbal Absurdities _____
- Other _____

Memory Span

- Drum beats or claps _____
- Single words _____
- Series of Instructions _____

Oral Expression

- Approximate age level _____
- Oral Mechanism - Structure and function _____
- Imitation of tongue, lip & jaw _____
- Imitation of single sounds _____
- Imitation of words (1, 2, 3 syllables; note sequencing) _____
- Articulation _____
- Naming - Retrieval _____
- Oral Formulation and syntax _____
- _____
- Sentence repetition _____
- Spontaneous _____
- Ideation and sequencing of ideas _____
- _____

VISUAL BEHAVIOR:

- Scanning _____
- Ocular pursuit _____
- Attention _____
- Discrimination
  - Color _____
  - Form-shape _____
  - External detail _____
  - Internal detail _____
  - Size _____
  - Position _____
  - Pattern _____
- Figure-ground _____
- Part-whole relationships _____

VISUAL MEMORY

- Short Term _____
- Long Term _____

Summarize observations on comprehension and remediation:

Summarize child's ability to grasp the meaning of complex verbalizations.
Give recommendations.

Indicate numbers child can remember; state whether remediation is advised.

Summarize any problems of an apraxic or dynarthric nature.

Attach test if necessary.
Give best cuing techniques.
Attach transcriptions of 8 to 10 sentences which illustrate child's level and problems.
List the types of constructions that have been stressed. Which should be emphasized?

Provide other comments and suggestions for modifying the child's behavior.

VISUAL-MOTOR INTEGRATION

- Laterality _____
- Manipulation of utensils _____
- Grasp _____
- Performance while painting, pasting, etc. _____
- Cutting _____
- Geometric designs (attach)
  - Circular scribbling _____
  - Horizontal line _____
  - Vertical line _____
  - Circle _____
  - Perpendicular cross _____
  - Scissors cross _____
  - Square _____
  - Triangle _____
- Spontaneous drawings _____

Additional observations:

Describe quality of performance.
Give specific suggestions for modifying behavior.

GROSS MOTOR BEHAVIOR:

- Gait _____
- Jumping _____
- Hopping _____
- Skipping _____
- Stairs _____
- Laterality kicking _____
- Other _____

Outline any unusual problems and suggestions for teaching.

BODY IMAGE:

- Use of body in space _____
- Points to body parts on self _____
  - on doll ___ picture _____
- Names body parts _____
- Completes puzzles of human figure _____
- Draw-a-Man (Attach) _____

Summarize problems and recommendations.

TIME ORIENTATION:

- Morning & night _____
- Day & night _____
- Morning & afternoon _____
- Concept of before & after _____

Summarize observations.

NONVERBAL ASSOCIATIONS & CONCEPTS

- Pre-linguistic inner Language _____
- Association objects or pictures on basic of function or use _____
- Select object which does not belong in category _____
- Arranges pictures in order to tell meaningful story _____

Summarize difficulties and recommendations.

NUMBER CONCEPTS

- One-to-one correspondence _____
- Rote counting _____
- Meaningful counting _____
- Cardinal of ordinal systems _____
- Concept of more & less; many and few _____
- Identification of numerals _____
- Simple reasoning _____

Indicate need for remediation in this area.

EDWARD C. FRIERSON, Ph.D.

Dr. Edward C. Frierson wishes to extend his apologies to the participants of the 1968 SYMPOSIUM for the unavailability of his presentation at the time of this printing. His contribution is in the process of revision and well be obtainable to all those in attendance at SYMPOSIUM March 24, 1969.

Symposium 1969
will be concerned with
"Controlling the Factor of Learning"
March 24, 1969
Rutgers - The State University

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